

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU03/00690

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. ⁷ : H01Q 11/08, 1/36, 21/06		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
WPAT keywords: antenna, aerial, helix, helical, spiral, ground, plane and similar terms		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5345248 A (HWANG et al) 6 September 1994 column 1 lines 42-49, column 4 lines 14-25, Figs 1, 2, 4, 6	1-8, 10-11, 13, 14, 17 9-12, 15-16
Y		
X	Patent Abstracts of Japan, JP 08-078946 (MITSUBISHI ELECTRIC CORP et al) 22 March 1996 abstract	1-8, 10-11, 13, 14, 17 9-12, 15-16
Y		
X	US 5041842 A (BLAESE) 20 August 1991 column 1 lines 35-45, column 3 lines 10-16, Fig 1	1-8, 10-11, 13-14 9-12, 15-17
Y		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
* Special categories of cited documents:		
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	
"P" document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search 30 June 2003	Date of mailing of the international search report 04 JUL 2003	
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer Mani Ramachandran Telephone No : (02) 6283 2233	

Form PCT/ISA/210 (second sheet) (July 1998)

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	EP 0528775 A1 (ERICSSON GE MOBILE COMMUNICATIONS INC) 24 February 1993 page 2, lines 39-50, page 3 lines 1-7, Fig 1	1-8,10-11,13-14 9-12, 15-17
X Y	Patent Abstracts of Japan, JP 2001-094333 (SATO T) 6 April 2001 abstract	1-8,10-11,13-14 9-12, 15-17
X Y	Patent Abstracts of Japan, JP 05-251919 (TOKIMEC INC) 28 September 1993 abstract	1-8,10-11,13-14 9-12, 15-17
X Y	GB 1507836 (MARCONI COMPANY LTD) 19 April 1978 whole document	1-8,10-11,13-14 9-12, 15-17
Y	US 6133891 A (JOSYPENKO) 17 October 2000 Figs 1, 2, column 6 lines 17-32	12
	<u>Note:</u> For the Y indications, US 5345248 and US 6133891 can be combined with any one of the other citations with relevance to the same claims.	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU03/00690

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report			Patent Family Member				
US	5345248	NONE					
JP	8078946	NONE					
US	5041842	NONE					
EP	528775	AU	21011/92	CA	2074015	FI	923614
		HK	1006608	JP	5206715	MX	9204664
		SE	9102379	SG	52224	US	5592184
JP	2001094333	JP	3382900				
JP	5251919	JP	3195009				
GB	1507836	NONE					
US	6133891	NONE					
END OF ANNEX							